

Einführung zu CouchDB



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Links

- <http://couchdb.apache.org/>
- <http://guide.couchdb.org/>
- <http://www.youtube.com/watch?v=ESDBM9-U804>
(CouchDB at GoogleTechTalks)

Datenbanken

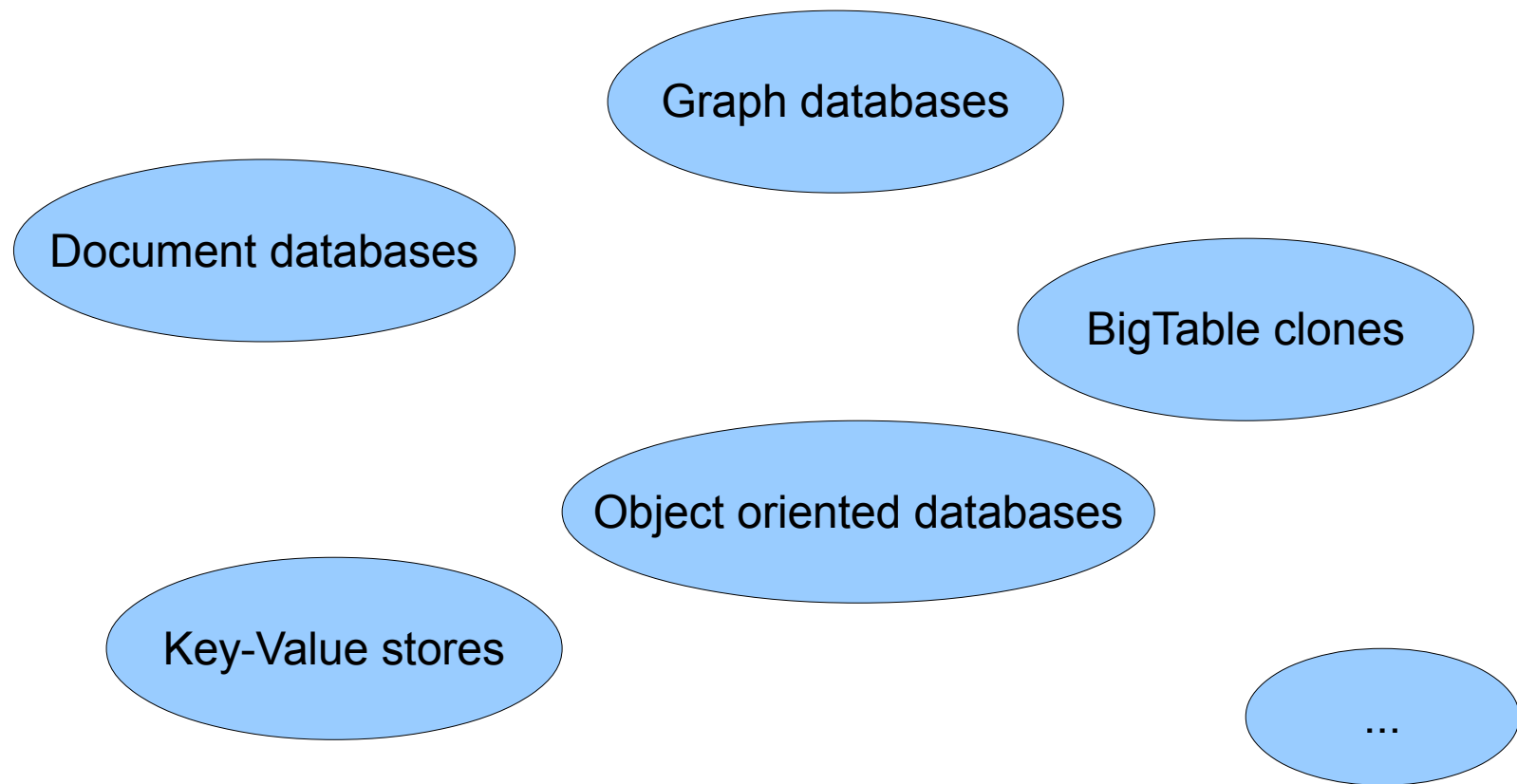
- Relationale Datenbank

Users	
<i>id</i>	<i>name</i>
42	Alice
43	Bob

Messages			
<i>id</i>	<i>user</i>	<i>body</i>	<i>replyTo</i>
1337	43	Hi! Want to go to party tonight?!	NULL
1338	42	No way, you nerdz.	1337

Datenbanken

- Auch andere Datenmodelle



Was brauchen wir?



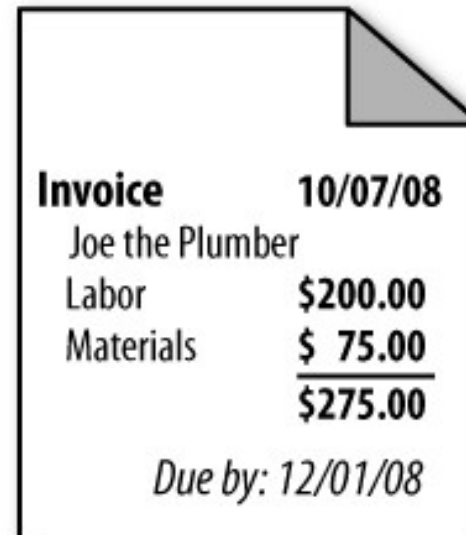
from <http://www.sixhills-consulting.com/>

CouchDB

- Document oriented
- Schema free
- Database
- HTTP server

Dokument

Real-world data is managed as real-world documents



from <http://guide.couchdb.org/>

Schema (free)

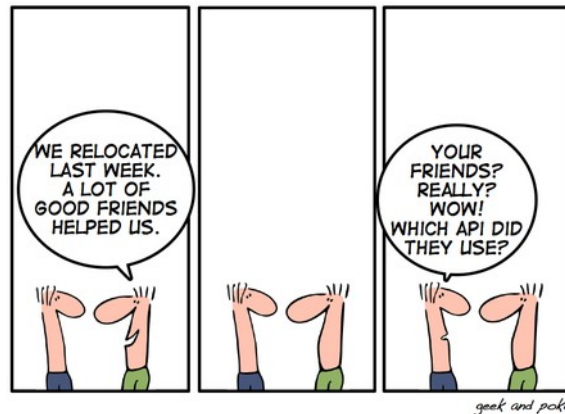
- JSON structure

```
{  
  name = "Vorlesung ...",  
  date = "2011/3/14",  
  time = "14:00:00",  
  repeat = "weekly",  
  repeat_until = "2011/7/11"  
}
```

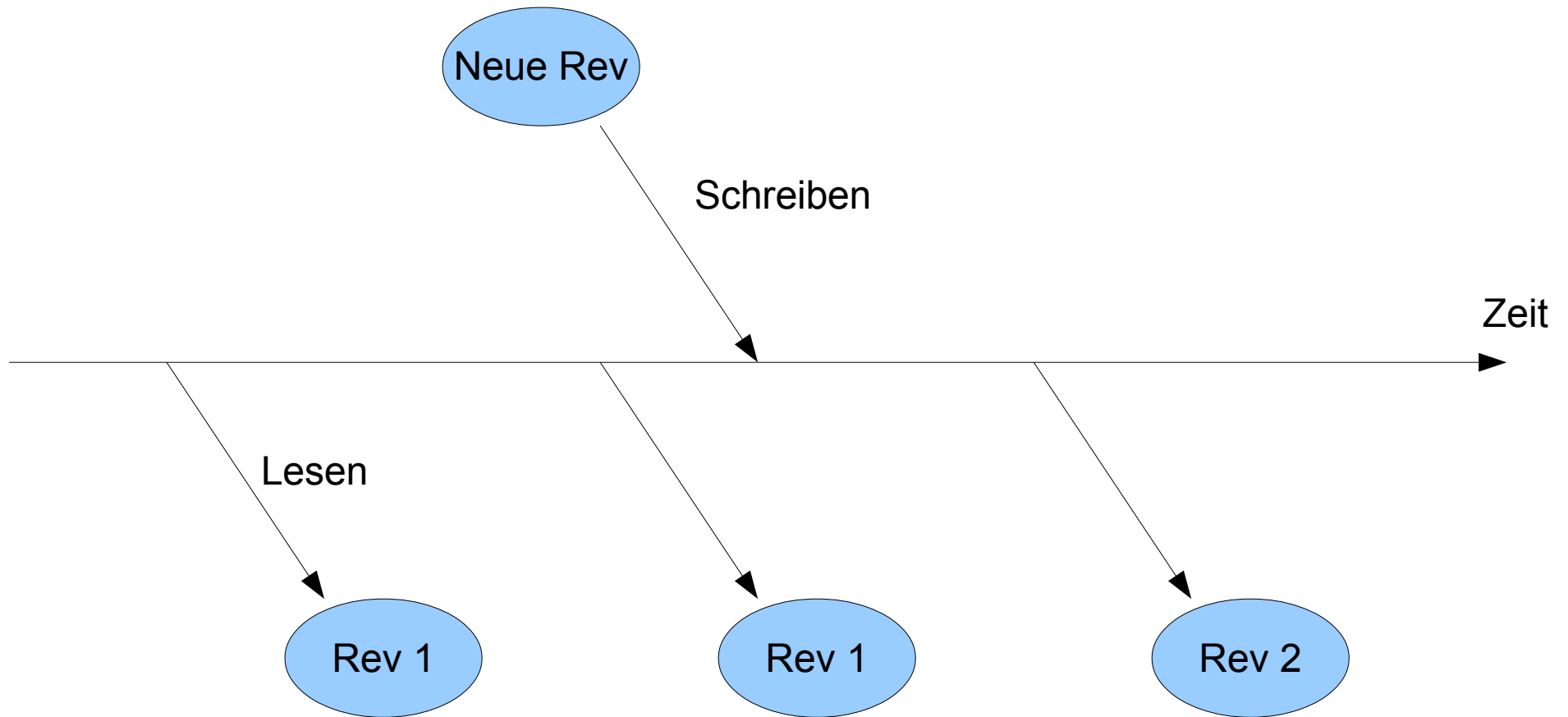
```
{  
  name = "GPN11",  
  date = "2011/6/23",  
  duration = [4, "day"]  
}
```


API

- RESTful
- Database methods, document methods, server configuration, authentication
(link)

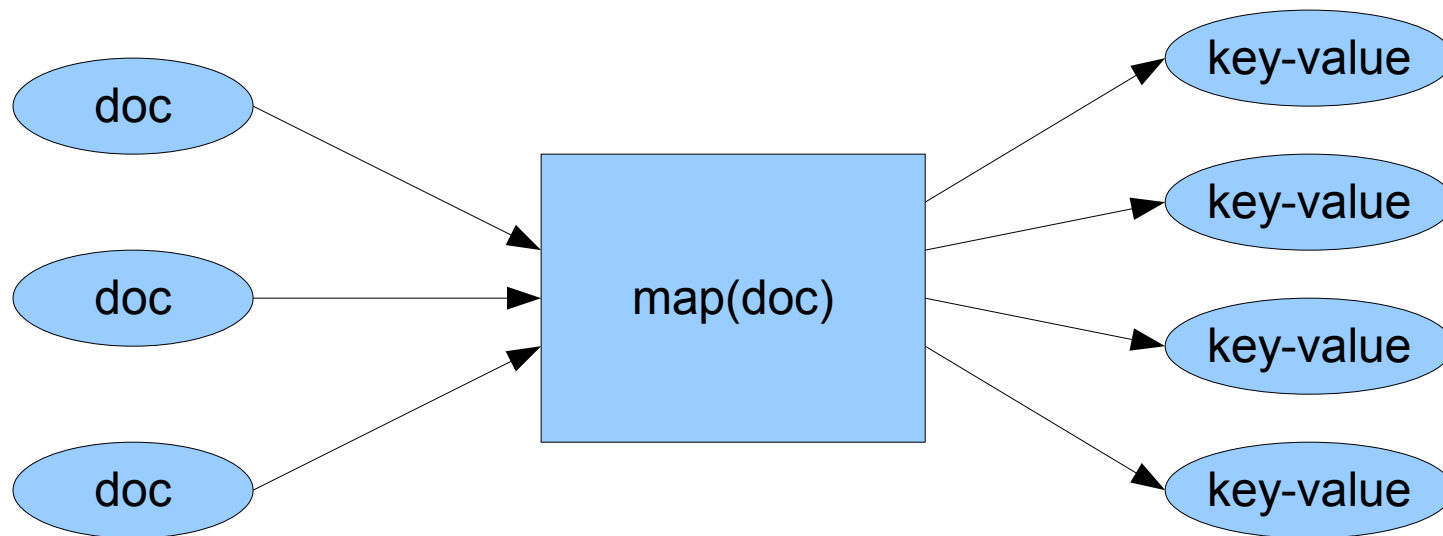


Multi-Version Concurrency Control



Views

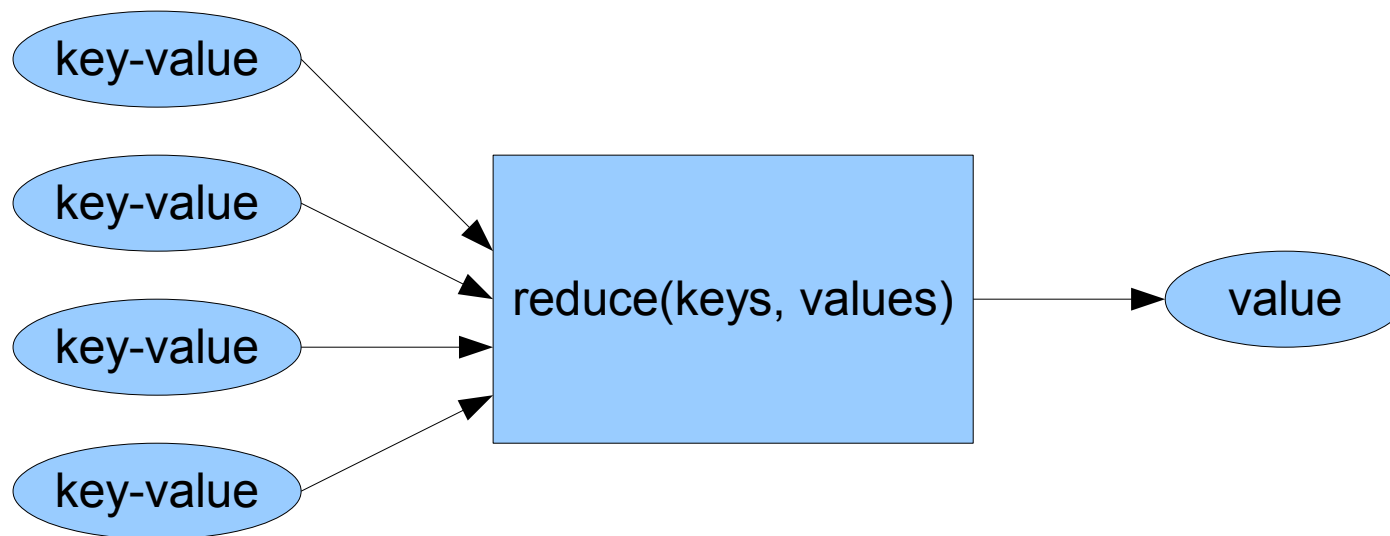
- Map



- `emit(key, value);`

Views

- Reduce (optional)



- return value;
- return [value, value, ...]; (Vorsicht!)

Beispiel

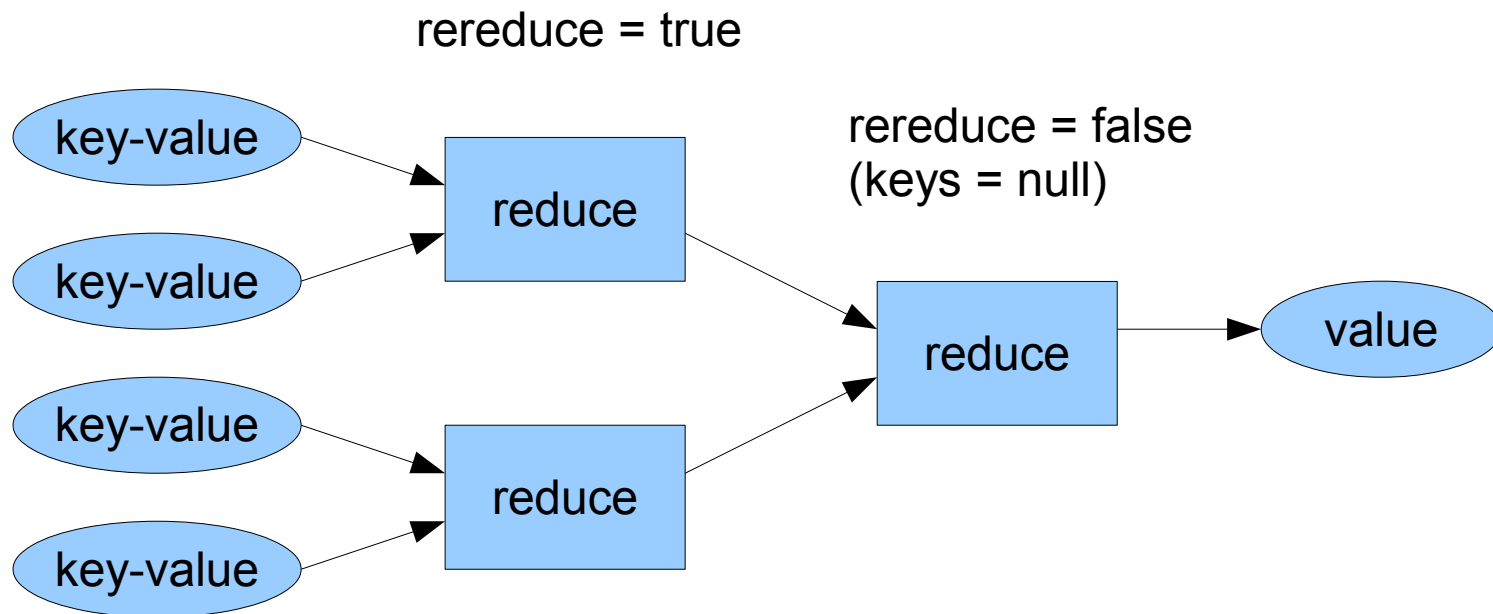
- Image database



Cache

Rereducer

- `reduce = function(keys, values, rereducer)`



Diverse Dokument-Typen

- Duck typing
 - “type”: “xxx”
 - “is_xxx”: true
- JOIN?
 - Cache
 - View collation (link)

Design document

- Views
- `_attachments`

(link)

Shows, lists

3 layers

HTML...

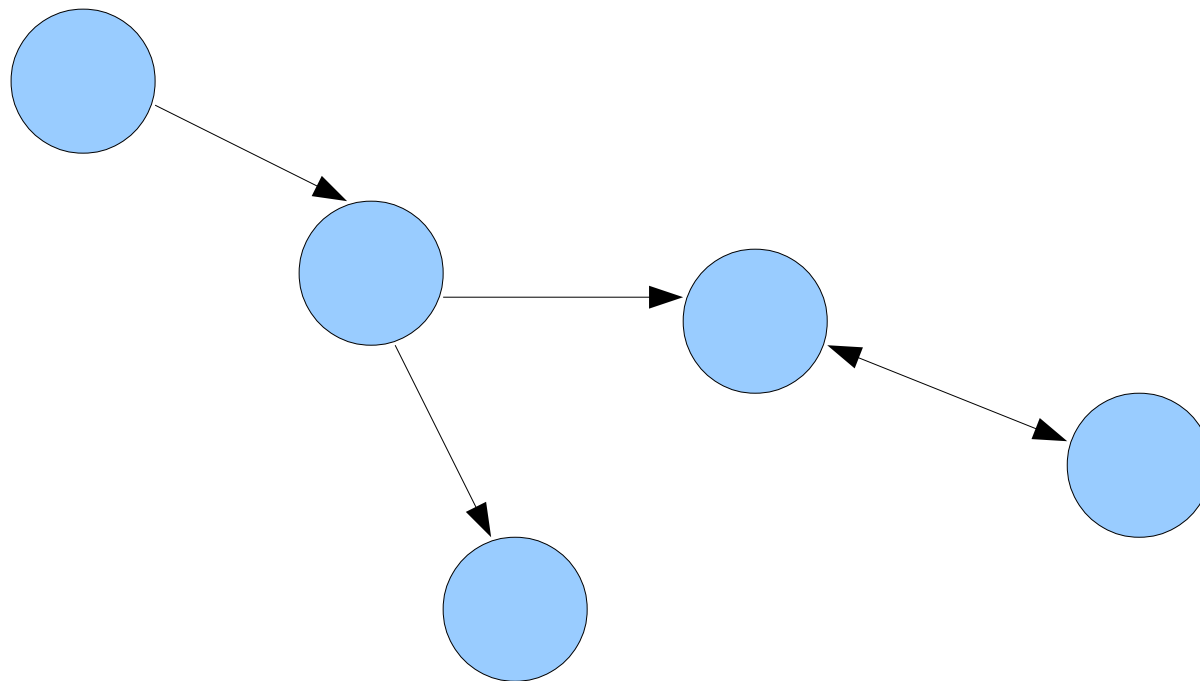
Python, Ruby...

CouchDB

Security

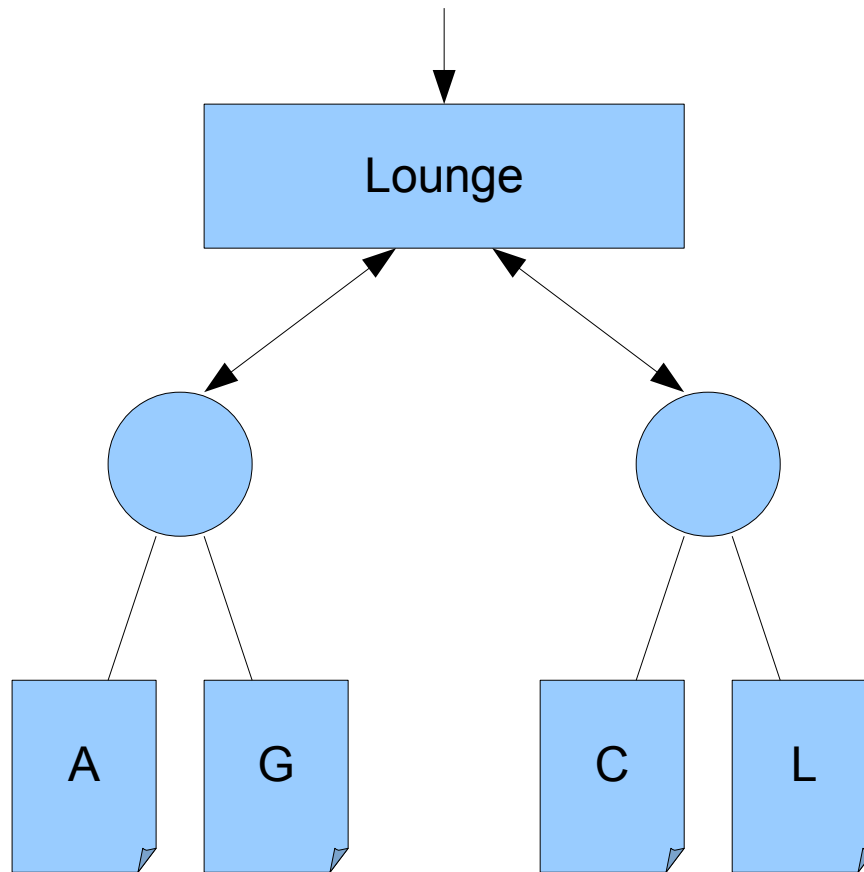
- Users
- Roles
- Validation functions
- Per-User read?
- HTTPS?

Replication



Clustering

- Lounge



CouchApp

- Beispiel: `git://github.com/jchris/sofa.git`

Auch auf den Smartphones

11 March 2011, 11:20

« previous | next »

CouchDB gets comfortable on the iPhone and iPad

The [Couchbase](#) developers have shown a [developer preview](#) of the [CouchDB](#) database which runs on Apple's iOS as found on the iPhone and iPad. Mobile Couchbase, as it is called, is a repackaging of Apache's CouchDB database, which stores, distributes and synchronises JSON formatted data between applications that use its RESTful API, or other instances of CouchDB. It is also capable of acting as a web server and hosting web applications.



from <http://www.h-online.com/>

Danke!